*British Journal of Venereal Diseases*, 1978, **54**, 209–214

# Abstracts

*These selected abstracts and titles from the world literature are arranged in the following sections:*



## *Syphilis and other treponematoses (Clinical and therapy)*

**Syphilitic meningitis with papilledema**
G. M. TRENHOLME, A. A. HARRIS, P. P. MCKELLAR, J. E. JUPA, AND S. LEVIN (1977). *Southern Medical Journal*, **70**, 1013–1014

**Yaws in the Americas, 1950–1975**
D. R. HOPKINS (1977). *Journal of Infectious Diseases*, **136**, 548–554

## *Syphilis (Pathology and experimental)*

**Demonstration by labelled treponemal antigen of specific antibodies in the tissue infiltrates of secondary syphilis**
K. SOLTANI, R. K. CHOY, AND A. L. LORINCZ (1977). *Journal of Investigative Dermatology*, **69**, 439–441

A purified suspension of Nichols strain *Treponema pallidum* was disrupted ultrasonically and conjugated with fluorescein isothiocyanate. After absorption with normal skin tissue, dilutions were tested against cryostat sections of normal skin; a dilution of 1 in 10 was found to eliminate non-specific fluorescence.

Cryostat sections 6 μm in thickness from 12 biopsy specimens of skin lesions from 11 patients with proved secondary syphilis were stained with the conjugate. Sections of normal skin and various non-syphilitic lesions served as negative controls. Nine of the 12 syphilitic lesions showed granular patterns of fluorescence in the dermis in areas containing aggregations of plasma cells; some fluorescence was directly located on these cells. No fluorescence was seen in the epidermis or dermal-epidermal junction, nor in the sections of non-syphilitic lesions. Prior treatment with unlabelled treponemal sonicate blocked fluorescence by the conjugated sonicate, thus demonstrating the specificity of the reaction. It is thought that the method may be of value in the tissue diagnosis of early syphilitic lesions which may mimic other skin disorders.

*A. E. Wilkinson*

***In vitro* cell response of *Treponema pallidum*-infected rabbits. I. Lymphocyte transformation**
V. WICHER AND K. WICHER (1977). *Clinical and Experimental Immunology*, **24**, 480–486

Transformation of peripheral lymphocytes from *Treponema pallidum*-infected rabbits was compared with the lymphocytes from appropriate controls. The lymphocyte response to phytohaemagglutinin was maximally suppressed in the infected rabbits approximately three weeks after development of a treponemal orchitis. In contrast there was a substantial spontaneous increase in the lymphocyte response after five days' incubation with lymphocytes taken from infected animals. A lesser degree of lymphocyte stimulation was detected using *Treponema pallidum*, Reiter strain, and cardiolipin antigens. It is suggested that the last response reflects stimulation of B lymphocytes, while the phytohaemagglutinin-induced depression of lymphocyte transformation represents either non-responsive T lymphocytes or depletion of peripheral T lymphocytes resulting from the recruitment of the cells to the infected areas. Whether these changes denote immune paralysis or immune deviation remains speculative.

*D. J. M. Wright*

***In vitro* cell response of *Treponema pallidum*-infected rabbits. II. Inhibition of lymphocyte response to phytohaemagglutinin by serum of *T. pallidum*-infected rabbits**
V. WICHER AND K. WICHER (1977). *Clinical and Experimental Immunology*, **29**, 487–495

Serum inhibitors of lymphocyte response to phytohaemagglutinin and to the one-way allogenic mixed lymphocyte response were found in *Treponema pallidum*-infected rabbits. The inhibitors were non-dialysable and thermolabile (56°C for 30 minutes). No antibody-mediated lymphocytotoxicity could be demonstrated. Pooled sera taken from rabbits within the first six months of infection showed more inhibition of phytohaemagglutinin-induced lymphocyte transformation, the lymphocytes being normal rabbit lymphocytes, while with sera taken between one and two years after infection inhibition of phytohaemagglutinin lymphocyte transformation was less frequent and stimulation more common. In addition to inhibitors of lymphocyte transformation, lymphocytes from *Treponema pallidum*-infected rabbits seemed to possess an impaired response to phytohaemagglutinin lymphocyte stimulation. For problems relating to the detection of serum inhibitors, the original paper should be consulted.

*D. J. M. Wright*

**_In vitro_ cell response of _Treponema pallidum_-infected rabbits. III. Impairment in production of lymphocyte mitogenic factor**

V. WICHER AND K. WICHER (1977). *Clinical and Experimental Immunology*, **29**, 496–500

The mitogenic activity on normal rabbit lymphocytes of supernatants from *Treponema pallidum*-infected rabbit inguinal and mesenteric lymph node cells and spleen cells were compared with supernatants from the appropriate controls. The antigen used was derived from Reiter strain spirochaetes. The active supernatants of lymph node cells of control animals showed a mitogenic index of between four and six, and the infected animals of less than two. The active supernatant of spleen cells of infected and control rabbits showed a mitogenic index of less than two. It was suggested that the low mitogenic activity was due to the presence of inhibitors of DNA synthesis. This was reflected by the active supernatants depressing lymphocyte transformation to PPD when the lymphocytes were taken from BCG immunised animals and also by impairment of the allogenic mixed lymphocyte response.

*D. J. M. Wright*

**Characterization of the attachment of _Treponema pallidum_ (Nichols strain) to cultured mammalian cells and the potential relationship of attachment to pathogenicity**

T. J. FITZGERALD, R C JOHNSON, J. N. MILLER, AND J. A. SYKES (1977). *Infection and Immunity*, **18**, 467–486

## *Gonorrhoea (Clinical)*

**Gonorrhoea in preadolescent children: an enquiry into source of infection and mode of transmission**

D. S. FOLLAND, R. E. BURKE, A. R. HINMAN, AND W. SCHAFFNER (1977). *Pediatrics*, **60**, 153–156

From November 1974 until December 1975 a study was made of all reported cases of gonorrhoea in children under 10 years of age in Tennessee. Clinical manifestations of the 73 patients identified included vaginal infection (48), urethritis (11), conjunctivitis (8), and ophthalmia neonatorum (6). Specimens from a total of 203 relatives and associates of 54 patients were cultured. Fifty-four (27%) had gonorrhoea; 43 of these were relatives. A history of sexual contact was found in 18 children, including seven for whom the contact had a positive culture for *Neisseria gonorrhoeae*. Sexual transmission was common in children with vaginitis or urethritis. In nine cases, sexual abuse or child neglect was suspected. The recognition of a child with gonococcal infection identifies a cluster of family members and associates who are at increased risk of having gonorrhoea.

*Authors' summary*

**Gonococcal arthritis in pregnancy**

A. MEHTA AND T. A. WRIGHT (1977). *Canadian Medical Association Journal*, **117**, 1190–1191

## *Gonorrhoea (Microbiology)*

**Transfer of plasmid-borne beta-lactamase in _Neisseria gonorrhoeae_**

E. S. BARON, A. K. SAZ, D. J. KOPECKO, AND J. A. WOHLHIETER (1977). *Antimicrobial Agents and Chemotherapy*, **12**, 270–280

The recognition of penicillin resistance mediated by β-lactamase production in *Neisseria gonorrhoeae* has led to experiments to discover the nature and mode of transmission of the enzyme coding plasmid. This paper reports evidence for the transfer of β-lactamase mediated resistance by conjugation.

β-lactamase activity was detected by two methods, a quantitative microiodometric technique, and a qualitative dye technique. Transfer of resistance occurred with a frequency of $1{\cdot}34 \times 10^{-3}$ when a 100:1 ratio of donor to recipient organisms was used, but at only $1{\cdot}04 \times 10^{-5}$ with a ratio of 10:1. They were unable to effect resistance transfer at a ratio of 1:1. Loss of the resistance in recipients occurred at high frequency, consistent with plasmid-mediated resistance. The possibility that transfer could be by transformation was explored, and discounted by the inability of DNAase to reduce the frequency of transfer. Phage mediated transfer may also be a possibility, but there is no evidence as yet of a gonococcal phage. Evidence for conjugal transfer was seen by the inability of cell-free filtrates, or chloroform-treated donor cells to transfer the plasmid.

The plasmid complement of the strains was analysed by agarose gel electrophoresis. Three plasmids were detected, 25 and 2·7 megadaltons (which are typical of previously described indigenous gonococcal plasmids), and a unique 4·8 megadalton plasmid found only in the β-lactamase producing strains. Consequently, it is surmised that 4·8 megadalton particle is the β-lactamase plasmid.

Transfer of the β-lactamase plasmid from one recipient to a second recipient could not be effected. This may have been due to the absence of the 25 megadalton plasmid from the donor recipient. It is therefore suggested that the 25 megadalton plasmid is responsible and necessary for the transfer of the 4·8 megadalton plasmid.

In conclusion, it is suggested that since the β-lactamase plasmid is readily lost, β-lactamase producing strains of *N. gonorrhoeae* are unlikely to become the predominant strains.

*G. L. Ridgway*

**Gonorrhoea-diagnosis by Gram stain in female adolescent**

E. R. WALD (1977). *American Journal of Diseases of Children*, **131**, 1094–1096

**Comparison of methods for rapid immunofluorescent staining of group-A streptococci and _Neisseria gonorrhoeae_**

M. A. H. QURAISHI, W. WASHINGTON, AND S. L. ROSENTHAL (1977). *Health Laboratory Science*, **14**, 279–281

**Identification of _Neisseria_ by electron capture gas-liquid chromatography of metabolites in a chemically defined growth medium**

C. D. MORSE, J. B. BROOKS, AND D. S. KELLOGG, JR (1977). *Journal of Clinical Microbiology*, **6**, 474–481

**Place for gonorrhea serology**

M. M. QUIGLEY (1977). *New York State Journal of Medicine*, **77**, 2053

## *Gonorrhoea (Therapy)*

**The bactericidal action of spectinomycin on _Neisseria gonorrhoeae_**

M. E. WARD (1977). *Journal of Antimicrobial Chemotherapy*, **3**, 232–329

The *in vitro* bactericidal activity for gonococci of four different antibiotics—penicillin, tetracycline, kanamycin, and spectinomycin at their appropriate peak

serum concentrations was compared. Spectinomycin was much more rapidly bactericidal for gonococci than the other antibiotics tested; this contrasts sharply with the bacteristatic action of spectinomycin for *Escherichia coli* at concentrations as high as 1 mg/ml. This rapid bactericidal action may be advantageous for any attempts to eradicate pencillinase producing gonococci. Electron microscope studies showed that spectinomycin produces alterations in gonococcal surface morphology leading to lysis. No significant differences were detected by sodium dodecyl sulphate polyacrylamide gel electrophoresis between the outer envelope proteins of gonococci grown in the presence or absence of spectinomycin, but there was evidence of ultrastructural damage to the cytoplasmic membrane. It is suggested that spectinomycin may inhibit the synthesis of a critical cytoplasmic membrane protein leading to ultimate impairment of the osmotic integrity of the cell.

*Author's summary*

**The *in vitro* activity of 15 penicillins and mecillinam against *Neisseria gonorrhoeae***

B. A. WATTS AND I. PHILLIPS (1977). *Journal of Antimicrobial Chemotherapy*, **3**, 331–337

Minimum inhibitory concentrations (MICs) of 15 penicillins and mecillinam were determined on solid media for 92 strains of *Neisseria gonorrhoeae*. Regression lines for MICs of each antibiotic against those of benzylpenicillin were calculated. The order of activity against benzylpenicillin-insensitive strains was ampicillin, amoxycillin, azidocillin, ticarcillin, carbenicillin, sulfocillin, phenoxymethylpenicillin, methicillin, phenethicillin, mecillinam, propicillin, flucloxacillin, nafcillin, cloxacillin, and dicloxacillin. The regressions for flucloxacillin, cloxacillin, and dicloxacillin were indistinguishable as were those of azidocillin, ticarcillin, and carbenicillin. Only ampicillin and amoxycillin showed greater activity than benzylpenicillin against relatively resistant strains.

*Authors' summary*

## *Non-specific genital infection*

**An improved method for demonstrating the growth of chlamydiae in tissue culture**

F. W. A. JOHNSON, L. Y. J. CHENCERELLE, AND D. HOBSON (1977). *Medical Laboratory Sciences*, **35**, 67–74

Coverslip cultures of McCoy cells were infected with the A22 strain of ewe abortion agent—a group B *Chlamydia*. Growth of the agent was enhanced by incorporating cycloheximide in the tissue culture medium throughout incubation of the infected monolayers. *Chlamydia* inclusions were better demonstrated by darkground microscopy of monolayers stained rapidly with Metrilene Blue than by light microscopy of Giemsa-stained preparations. This simplified procedure has been applied to the diagnosis of human genital infections with *C. trachomatis*. An increased number of patients were found to have positive results, together with an increase in the number of chlamydial inclusion-forming units recovered from the swabs in cycloheximide-treated cultures.

*Authors' summary*

**Cultivation of *Chlamydia trachomatis* in cycloheximide-treated McCoy cells**

K. T. RIPA AND P-A. MARDH (1977). *Journal of Clinical Microbiology*, **6**, 328–330

An isolation technique for *Chlamydia trachomatis* using McCoy cells is described. In contrast to earlier techniques employing such cells, no pretreatment of the cells was used. The glutarimide antibiotic cycloheximide was added to the culture medium used for incubating the cells after infection. Cycloheximide was used at concentrations that depressed, but did not completely inhibit, the metabolism of the eucaryotic host cells. In studies on different immunotypes of *C. trachomatis* cultured in the yolk sac of embryonated hen eggs, the cycloheximide technique was compared with a method using cells pretreated with 5-iodo-2-deoxyuridine. The cycloheximide method gave greater numbers of inclusion-forming units per coverslip for all the immunotypes of trachoma-inclusion conjunctivitis agents tested—that is A to I. In a study of 194 cervical and urethral specimens from women cycloheximide-treated McCoy cells were found to be more efficient than cells treated with 5-iodo-2-deoxyuridine for the isolation of *C. trachomatis*.

*Authors' summary*

**Enzyme-linked immunosorbent assay for chlamydial antibodies**

V. K. LEWIS, A. L. THACKER, AND S. H. MITCHELL (1977). *Journal of Clinical Microbiology* **6**, 507–510

An enzyme-linked immunosorbent assay (ELISA) detected chlamydial antibodies in human sera. The assay antigen produced in cell cultures infected with *Chlamydia psittaci* was formalin-fixed to microplates. Single convalescent-phase sera positive for chlamydial antibodies by a complement-fixation test were positive at even higher dilutions by ELISA. Paired sera with diagnostic rises in complement-fixing antibody showed seroconversion by ELISA also. Control sera from persons with no history of chlamydial infection were negative by both tests. Sera from patients with psittacosis or lymphogranuloma venereum were ELISA-positive, indicating that the assay with the antigen used in this study is genus specific rather than species specific.

*Authors' summary*

**Bacteriology of the urethra in normal men and men with nongonococcal urethritis**

W. R. BOWIE, H. M. POLLOCK, P. S. FORSYTH, J. F. FLOYD, E. R. ALEXANDER, S-P. WANG, AND K. K. HOLMES (1977). *Journal of Clinical Microbiology*, **6**, 482–488

Sixty-nine Caucasian males without a previous history of urethritis and who developed non-gonococcal urethritis (NGU) and 39 similar men without urethritis (NU) were cultured from the urethra for *Chlamydia trachomatis*, *Mycoplasma hominis*, *Ureplasma urealyticum*, aerobes, and anaerobes. *C. trachomatis* infection was proved by culture or serology in 26 (38%) of the NGU group and in one (3%) of the NU group; the *C. trachomatis*-negative NGU group had significantly more *U. urealyticum* (81%) than the *C. trachomatis*-positive NGU group (42%) or the NU group (59%). Aerobes were isolated from all but two men with *C. trachomatis*-negative NGU. Anaerobes were isolated from significantly more NU men (91%) than from men with NGU (66%). The aerobic and anaerobic flora of the two NGU groups were similar. The NU group had significantly more aerobic lactobacilli, *Haemophilus vaginalis*, alpha-haemolytic streptococci (not *Streptococcus faecalis*), and anaerobes, predominantly *Bacteroides* species. This study has provided information about the prevalence and the variety

of the aerobic and anaerobic microbiological flora of the anterior urethra of sexually active males. It does not implicate any bacteria other than *C. trachomatis* and *U. urealyticum* as potential causes of NGU.

*Authors' summary*

**Interrelationship of *Chlamydia trachomatis* and other pathogens in the female genital tract**

G. L. RIDGWAY AND J. D. ORIEL (1977). *Journal of Clinical Pathology*, **30**, 933–936

The isolation of *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, and *Candida albicans* in the female genital tract was studied in 1323 patients attending a venereal disease clinic. Disruption of the cell monolayers used for the isolation of *C. trachomatis* was significantly associated with the presence of *T. vaginalis;* this effect was markedly reduced by the addition of vancomycin to gentamicin and amphotericin B in the transport and growth media. The only significant positive association was the more frequent isolation of *C. trachomatis* in the presence of *N. gonorrhoeae*. There was a negative association between *N. gonorrhoeae* and *C. albicans* and between *T. vaginalis* and *C. albicans*, the fungus being isolated significantly less often when these microorganisms were present.

*Authors' summary*

***Chlamydia* and non-specific urethritis**

J. W. SEGURA, T. F. SMITH, L. A. WEED, AND G. R. PETTERSEN (1977). *Journal of Urology*, **117**, 720

## *Reiter's disease*

**The sacroiliitis of acute Reiter's syndrome**

A. S. RUSSELL, P. DAVIS, J. S. PERCY, AND B. C. LENTLE (1977). *Journal of Rheumatology*, **4**, 293–296

Thirty-three patients with the classical triad of Reiter's syndrome were examined for sacroiliitis by bone scan. HLA typing was carried out and found to be positive for HLA-27 in 29 patients. Sacroiliitis was definitely present in nine and probably present in 15 patients. Asymmetry was prominent as noted by earlier investigators in contrast with the symmetrical picture associated with ankylosing spondylitis. As the abstractor observed some years ago, the sacroiliitis settled usually when the disease remitted and persistence of sacroiliitis was rare.

*G. W. Csonka*

**Acute venereal arthritis—comparative study of acute Reiter syndrome and acute gonococcal arthritis**

W. C. MCCORD AND K. M. NIES (1977). *Archives of Internal Medicine*, **137**, 858–862

## *Trichomoniasis*

**The effect of trichomonal vaginitis on vaginal pH**

C. L. PARSONS, S. LOFLAND, AND S. G. MULHOLLAND (1977). *Journal of Urology*, **118**, 621–622

Assuming that the vaginal pH is the primary defence in premenopausal women against colonisation of the vaginal introitus with Gram-negative organisms, the authors studied normal women and those with trichomonal vaginitis to determine whether inflammation of the vaginal tissues had a significant effect on the pH.

Midstream specimens of urine and cultures from the periurethral area and vaginal introitus were taken from 16 premenopausal women with no history of urinary tract infection and from six premenopausal women with trichomonal vaginitis. Fourteen of the 16 normal women had a vaginal pH of 4·0 or less and a predominantly Gram-positive introital flora. In contrast, five of the six women with vaginitis had a vaginal pH of 5·0 or more. The introital flora in these patients were similar to those of the control group, but unfortunately five of them had completed courses of ampicillin for cystitis about one week before entering this study. The sixth patient also had cystitis with a heavy growth of *Escherichia coli* in the vagina, urethra, and midstream urine. Her vaginal pH was 5·1. This dropped to 4·0 after a week's course of metronidazole and nitrofurantoin. The perineal flora was Gram-positive by then.

From these findings the authors suggest that inflammation of vaginal tissues results in an increase in the pH of the vaginal secretions. This leads to colonisation of the vaginal introitus favouring the onset of cystitis.

*C. S. Ratnatunga*

**An evaluation of tinidazole as single-dose therapy for the treatment of *Trichomonas vaginalis***

R. JONES AND P. ENDERS (1977). *Medical Journal of Australia*, **2**, 679–681

## *Candidosis*

**The susceptibility of *Candida albicans* to amphotericin B, nystatin, and 5-fluorocytosine**

L. K. HAMRA AND I. J. PANKIEWICZ (1977). *Medical Journal of Australia*, **2**, 749–752

## *Genital herpes*

**Correspondence: The prevalence of *Herpesvirus hominis* in genital lesions with suggestive chancre morphology**

N. SHARON (1977). *American Journal of Clinical Pathology*, **68**, 628–629

For a period of two years 73 university students were referred for darkground examination of genital lesions for the presence of *Treponema pallidum*. Specimens of exudate were also cultured for *Herpesvirus hominis* in HEP-2 cell cultures and on the chorioallantoic membranes of 10-day-old fertile eggs.

*T. pallidum* was found in three of 59 lesions in males and in two of 14 in females. *Herpsesvirus hominis* was isolated from 22 darkground negative lesions in 51 males and from four of 11 lesions in females. It is recommended that virus isolation techniques should form part of the routine investigation of genital lesions.

*A. E. Wilkinson*

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**Incidence and distribution of herpes simplex virus Types 1 and 2 from genital lesions in college women**

J. E. KALINYAK, G. FLEAGLE, AND J. J. DOCHERTY (1977). *Journal of Medical Virology*, **1**, 175–181

During a nine-month period, 9772 women were treated at the student health centre's gynaecology clinic. Herpes simplex virus was isolated from 30 of 57 patients clinically diagnosed as suffer-

ing from a herpetic or herpetic-like genital infection, giving a virological incidence rate of 0·31%. Using virus plaque diameter in chick embryo cells and heat stability of viral thymidine kinase, 37% of the isolates were classified as herpes simplex virus Type 1 and 63% were classified as herpes virus Type 2.

*Authors' summary*

**Antibody activity to Type 1 and Type 2 herpes simplex virus in human cervical mucus**

B. M. COUGHLAN AND G. R. B. SKINNER (1977). *British Journal of Obstetrics and Gynaecology*, **84,** 622–629

Cervical mucus collected from 29 patients randomly selected from a routine gynaecological clinic was examined for neutralising antibody activity to herpes simplex virus Types 1 and 2. Findings were correlated with the neutralising activity against these viruses found in sera from the same patients. The cervices of the patients were all macroscopically normal, and no patient had clinical or laboratory evidence of genital tract infection.

Neutralising antibody to Type 1 herpes simplex virus was detected in 24 of 28 patients and to Type 2 herpes simplex virus in 18 of 24 patients. This neutralising antibody was present in both IgA and IgG fractions of cervical mucus, the IgA fraction containing about three times more neutralising antibody per unit of immunoglobulin concentration than the IgG fraction. Studies on concentrated pooled mucus samples identified a type-common immunoprecipitin, in addition to type-specific neutralising antibodies against both virus types. There was on average a higher Type 2 neutralising antibody activity in mucus than in serum, and there was no correlation between serum and mucus neutralising antibody levels for either virus type.

The authors feel their results support the concept of an independent local antibody system in the cervix. They suggest local antibodies may provide a more sensitive index of previous exposure to herpes simplex Type 2 than circulating antibodies. Studies on neutralising antibody activity to herpes simplex virus may thus strengthen the existing seroepidemiological evidence of an association between herpes simplex virus Type 2 and carcinoma of the cervix.

*Shirley Richmond*

**Latent herpes simplex virus infections in sensory ganglia of mice after topical treatment with adenine arabinoside and adenine arabinoside monophosphate**

R. J. KLEIN AND A. E. FRIEDMAN-KIEN (1977). *Antimicrobial Agents and Chemotherapy*, **12,** 577–581

**Herpes simplex virus vaccines**

T. G. WISE, P. R. PAVAN, AND F. A. ENNIS (1977). *Journal of Infectious Diseases*, **136,** 706–711

## *Other sexually transmitted diseases*

**Chancroid: a study of 500 cases**

T. TAN, V. S. RAJAN, S. L. KOE, N. J. TAN, B. H. TAN, AND A. J. GOH (1977). *Asian Journal of Infectious Diseases*, **1,** 27–28

Chancroid has become rare in Western countries but it is still prevalent in tropical and subtropical areas. Five hundred cases seen during a period of 12 months at the Middle Road Hospital, Singapore, are reviewed. Exudate from the lesions was examined by Gram-stained smears for the presence of organisms resembling *Haemophilus ducreyi* and cultured for 48 hours in the patient's own serum after this had been inactivated at 56°C for 30 minutes; 278 specimens gave positive results by both methods. Sixty-two per cent of the patients had single and 38% multiple lesions; pain and adenitis were present in 19%. Sixty-four (13%) patients also had other venereal diseases including 21 with syphilis and 13 with gonorrhoea. Treatment with tetracycline (2 g daily for two weeks) was effective in 189 patients. Many infections were resistant to tetracycline but responded well to a course of 7–14 g streptomycin. *A. E. Wilkinson*

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**Correspondence: spread of condylomata acuminata to infants and children**

F. J. STORRS (letter) and L. GOLDMAN (reply) (1977). *Archives of Dermatology*, **113,** 1294

**Condyloma acuminatum of scrotum**

B. RAY (1977). *Journal of Urology*, **117,** 739

**Thio-tepa in the management of anorectal condylomata acuminata: report of two cases**

M. D. KERSTEIN (1977). *Diseases of the Colon and Rectum*, **20,** 625–626

## *Miscellaneous*

**Pathogenesis of acute pelvic inflammatory disease: role of contraception and other risk factors**

D. A. ESCHENBACH, J. P. HARNISCH, AND K. K. HOLMES (1977). *American Journal of Obstetrics and Gynecology*, **128,** 838–850

In a case-control of matched pairs, the risk of acute pelvic inflammatory disease (PID) was 4·4 times higher in users of intrauterine devices (IUDs) than in non-users ($P<0·001$). Of approximately 500 000 cases of acute PID occurring annually in the United States, an estimated 110 000 are attributable to IUDs, costing over $44 million a year. PID was attributable to the IUD in 77% of IUD users. No particular type of IUD was implicated. The relative risk of acute PID in IUD users compared with non-users was higher in nulligravid women than in previously pregnant women and was directly related to socioeconomic state (SES), but the total annual risk of PID in IUD users appears inversely related to SES. IUD use significantly increased the risk of non-gonococcal PID. Fever occurred in 13 (21%) of 61 IUD users and in 59 (41%) of 143 non-users ($P<0·025$). Among women with non-gonococcal PID, an adnexal mass was noted in 14 (40%) of 35 IUD users and in only 12 (15%) of 78 non-users ($P<0·01$). An increased risk of gonococcal PID was found in non-Caucasians and in women not using contraception, while the risk of non-gonococcal PID was increased in women with a history of gonorrhoea. Oral contraceptives may protect women with gonorrhoea from developing PID. Menstruation precipitates the onset of symptoms of gonococcal PID. *Authors' summary*

**Amoebiasis: an increasing problem among homosexuals in New York City**

M. J. SCHMERIN, A. GELSTON, AND T. C. JONES (1977). *Journal of the American Medical Association*, **238,** 1386–1387

The authors report the case histories of two male homosexual patients attending

the New York Hospital in whose stools *Entamoeba histolytica* was found during the investigation of attacks of lower abdominal pain and watery stools. Both patients also had positive stool cultures for *Shigella flexneri*. As neither patient had travelled from New York City the authors postulate oroanal transmission of the pathogens. One patient's sexual consort was also found to have *E. histolytica* and *Sh. flexneri*. The amoebiasis responded to treatment with diiodohydroxyquin and metronidazole, and the shigellosis to ampicillin.

The authors then reviewed the records of the 98 patients in whose stools *E. histolytica* had been isolated in the previous five years. Fifty-six were males over the age of 15 but only 50 could be studied. Thirty of these males had travelled in areas where *E. histolytica* is endemic, most of them during the previous year. Two of these travellers and all 20 of the remainder were found to be homosexual. Other venereal diseases had occurred in these 20 males; syphilis in five, gonorrhoea in six, hepatitis in nine, shigellosis in six, and giardiasis in five. The authors also note that the incidence of amoebiasis in homosexuals is increasing.

*G. D. Morrison*

**Venereal transmission of enteric pathogens in male homosexuals**
D. MILDRAN, A. M. GELB, AND D. WILLIAM (1977). *Journal of the American Medical Association*, **238**, 1387–1389

The authors report the case histories of two male homosexual patients seen at the Beth Israel Medical Centre New York.

The first patient had a rapid onset of watery diarrhoea, chills, and fever, although his stools had been looser and more frequent than usual during the previous two months. Stool examination showed *Giardia lamblia* and culture showed *Shigella sonnei*. There had been recent sexual contact with a male having a history of amoebiasis. He was treated with quinacrine for his giardiasis and rapidly recovered. He remained well for six months, and then developed abdominal pain and watery diarrhoea. Stool examination showed *E. histolytica*, but no other pathogen. He was treated with metronidazole and rapidly recovered. During the six-month period he had frequent sexual intercourse with other men.

The second patient gave a history of successful treatment for amoebiasis three years earlier. Eight months before he was seen, he developed fever, nausea, and bloody diarrhoea. Stool examination revealed *Giardia lamblia* and *E. histolytica*, but the stool was not cultured for bacteria. Despite antiprotozoal treatment the bloody diarrhoea continued and *Shigella sonnei* was cultured from his stools. He was treated with ampicillin but his symptoms continued. Three stool examinations and cultures were free of pathogens but the diarrhoea continued until he was treated with metronidazole.

The authors discuss the incidence of amoebiasis and giardiasis in homosexual males in the USA. They conclude that analingus with possible coprophagy is the likely means of transmission of all three pathogens.

*G. D. Morrison*

**Examining the homosexual male for sexually transmitted diseases**
Y. M. FELMAN AND J. M. MORRISON (1977). *Journal of the American Medical Association*, **238**, 2046–2047

**Bacteriological findings in cultures of clinical material from Bartholin's abscess**
M. W. D. WREN (1977). *Journal of Clinical Pathology*, **30**, 1025–1027

**Side effects of minocycline: different dosage regimes**
D. W. GUMP, T. ASHIKAGA, T. J. FINK, AND A. M. RADIN (1977). *Antimicrobial Agents and Chemotherapy*, **12**, 642–646

**Rheumatoid factor in a patient with Reiter's disease and aortic incompetence**
R. M. DU BOIS AND S. FREEDMAN (1977). *British Medical Journal*, **2**, 1260–1261

**Treatment of Behçet's syndrome with transfer factor**
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